

THE UNIVERSITY OF CHICAGO

A retrofit technology for air-fuel fired, vertical glass furnace for oxygen firing or boosting to provide additional heat to the process to increase furnace production capacity. The additional firing using oxygen is strategically controlled to enable enhanced radiation from oxygen flame for the spheroidizing process without negative effects on the overall process. With proper implementation, an increased production from 50% to 200%, depending on the size of the spheres, can be achieved while maintaining acceptable product quality. Processes in accordance with the present invention can be performed using one of a number of methods of oxygen boosting.